



## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R1-ES-2020-0104; FF09E22000 FXES11130900000 234]

RIN 1018-BC98

### Endangered and Threatened Wildlife and Plants; Removing *Phyllostegia glabra* var. *lanaiensis* from the List of Endangered or Threatened Plants

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule; withdrawal.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), withdraw the proposal to remove *Phyllostegia glabra* var. *lanaiensis* from the Federal List of Endangered and Threatened Plants (List). This withdrawal is based on new surveys conducted over the past 3 years since completing the 5-year review for the species; these surveys have identified new suitable habitats comprised of native vegetation within the former range of *P. glabra* var. *lanaiensis*. Therefore, we determined that additional information is needed before concluding that the species is extinct. With this withdrawal of the proposal, *P. glabra* var. *lanaiensis* will remain on the List as endangered. Elsewhere in this issue of the *Federal Register*, we publish a final rule removing 21 species that were part of our September 30, 2021, proposed rule.

**DATES:** The proposal to remove *P. glabra* var. *lanaiensis* from the Federal List of Endangered and Threatened Plants, which published on September 30, 2021 (86 FR 54298), is withdrawn on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** Relevant documents used in the preparation of this withdrawal are available on the internet at <https://www.regulations.gov> at Docket No. FWS-R1-ES-2020-0104.

**FOR FURTHER INFORMATION CONTACT:** Earl Campbell, Field Supervisor, Pacific Islands Fish and Wildlife Office (see **ADDRESSES**); telephone 808–792–9400; facsimile 505–346–2542. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

**SUPPLEMENTARY INFORMATION:**

**Previous Federal Actions**

We published a final rule to list *Phyllostegia glabra* var. *lanaiensis* as an endangered species on September 20, 1991 (56 FR 47686), and *P. glabra* var. *lanaiensis* was included in the Lanai plant cluster recovery plan in 1995 (USFWS 1995, entire). At the time of listing, no wild individuals had been seen since 1914, although there was one questionable sighting from the 1980s that was later considered to be *P. glabra* var. *glabra* (USFWS 1995, pp. 31–35; USFWS 2012, p. 7). Threats included habitat degradation and herbivory by feral ungulates, the establishment of ecosystem-altering invasive plant species, and the consequences of small population sizes (low numbers) (USFWS 1995, p. 56). In 2000, designation of critical habitat was considered not prudent for *P. glabra* var. *lanaiensis* because this plant had not been observed in the wild in over 20 years, and no viable genetic material was available for recovery efforts (65 FR 82086; December 27, 2000). Two 5-year status reviews have been completed; the 2012 review (initiated on April 8, 2010; see 75 FR 17947) recommended surveys within the historical range and within suitable habitat on Lanai, with no change in status. Despite repeated surveys of

historical and suitable habitat by botanists since 2006, *P. glabra* var. *lanaiensis* has not been found (Plant Extinction Prevention Program (PEPP) 2012, p. 45; Oppenheimer 2019, in litt.). In 2012, PEPP reported that *P. glabra* var. *lanaiensis* was likely extinct. The 5-year status review completed in 2019 (initiated on February 12, 2016; see 81 FR 7571) recommended delisting due to extinction.

On September 30, 2021, we published a proposed rule to remove 23 species, including *P. glabra* var. *lanaiensis*, from the Federal Lists of Endangered and Threatened Wildlife and Plants (i.e., to “delist” the species) due to extinction (86 FR 54298). At that time, we invited the public to comment on the proposal.

Elsewhere in this issue of the *Federal Register*, we publish a final rule to remove 21 of the 23 species included in our September 30, 2021, proposed rule from the Federal List of Endangered and Threatened Wildlife. That final rule’s **Summary of Changes from the Proposed Rule** references this rule withdrawing the proposed delisting of *P. glabra* var. *lanaiensis*.

### **Supporting Documents**

Prior to publishing the proposed delisting rule (86 FR 54298; September 30, 2021), we conducted a status assessment for *P. glabra* var. *lanaiensis*. The results of this assessment are summarized in a species assessment form, which represents a compilation of the best scientific and commercial data available concerning the status of the species, including the past, present, and future stressors to this species (Service 2021, entire).

In accordance with our policy, “Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities,” which was published on July 1, 1994 (59 FR 34270) and our August 22, 2016, Director’s Memorandum “Peer Review Process,” we sought the expert opinion of five appropriate and independent specialists regarding scientific data and interpretations contained in the 5-year review for *P. glabra* var. *lanaiensis*. We sent copies of the 5-year review to the peer reviewers immediately

following publication of the proposed rule in the *Federal Register* (86 FR 54298; September 30, 2021). The purpose of such review is to ensure that our decisions are based on scientifically sound data, assumptions, and analysis. We received feedback from one of the five peer reviewers. We have incorporated the results of this review, as appropriate, into the species assessment form and this document.

### **Summary of Comments and Recommendations**

In the proposed rule published on September 30, 2021 (86 FR 54298), we requested that all interested parties submit written comments on the proposal by November 29, 2021. We also contacted appropriate State agencies, scientific experts and organizations, and other interested parties and invited them to comment on the proposal. A newspaper notice inviting the public to provide comments was published in USA Today on October 8, 2021. All substantive information regarding the delisting of *P. glabra* var. *lanaiensis* that was provided during peer review and the comment period has been incorporated directly into this final determination or into our species assessment form, as appropriate, or is addressed below.

### **Peer Review Comments**

We reviewed all comments we received from the peer reviewer for substantive issues and new information regarding *P. glabra* var. *lanaiensis*. The peer reviewer provided additional information and clarifications on results of surveys, which we incorporated into the species assessment form and this document.

### **Public Comments**

We reviewed all public comments that we received on the proposed rule (86 FR 54298; September 30, 2021). While there were many comments that discussed other species in the proposed rule, there were no comments that specifically addressed *P. glabra* var. *lanaiensis*. We did not receive a request for a public hearing for this species.

### **Background**

A thorough review of the taxonomy, range and distribution, life history, and ecology of *P. glabra* var. *lanaiensis* is presented in the species assessment form (Service 2021, entire) and is briefly summarized here. *Phyllostegia glabra* var. *lanaiensis* is a short-lived perennial herb. Flowering cycles, pollination vectors, seed dispersal agents, longevity, specific environmental requirements, and limiting factors of *P. glabra* var. *lanaiensis* remain unknown (USFWS 1995, p. 19; USFWS 2012, p. 7). *P. glabra* var. *lanaiensis* was described as a variety of *P. glabra* from specimens collected from Lanai by Ballieu, Munro, and Mann and Brigham. It differed from *P. glabra* var. *glabra* in its longer calyx (the collection of modified leaves that enclose the petals and other parts of a flower) (0.3 inches or 10–11 millimeters) and narrowly lanceolate leaves (Wagner et al. 1990, p. 816). No taxonomic changes have been made since the variety was described in 1934.

Historically, *P. glabra* var. *lanaiensis* was known from only two collections from Lanai, one from the “mountains of Lanai,” and the other from Kaiholena Gulch, where it was last collected in 1914 (USFWS 1991, p. 47688; USFWS 1995, pp. 31–35; Wagner 1999, p. 269; Hawaii Biodiversity and Mapping Program 2010, entire). A report of this species from the early 1980s in a gulch feeding into the back of Maunalei Valley probably was erroneous and likely *P. glabra* var. *glabra* (USFWS 1995, pp. 31–35; USFWS 2003, p. 1223; Wagner 1999, p. 269). Very little is known of the preferred habitat or associated species of *P. glabra* var. *lanaiensis* on the island of Lanai. It has been observed in lowland wet-mesic forest in gulch bottoms and sides, often in quite steep areas, in the same habitat as the endangered *Cyanea gibsonii* (also known as *Cyanea macrostegia* ssp. *gibsonii*) (USFWS 1995, p. 23).

### **Regulatory and Analytical Framework**

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations in title 50 of the Code of Federal Regulations set forth the procedures for determining whether a

species is an endangered species or a threatened species, issuing protective regulations for threatened species, and designating critical habitat for endangered and threatened species. In 2019, jointly with the National Marine Fisheries Service, the Service issued a final rule that revised the regulations in 50 CFR part 424 regarding how we add, remove, and reclassify endangered and threatened species and the criteria for designating listed species' critical habitat (84 FR 45020; August 27, 2019).

Under the Act (16 U.S.C. 1531 et seq.), we must review the status of all listed species at least once every 5 years. We must delist a species if we determine, on the basis of the best available scientific and commercial data, that the species is neither a threatened species nor an endangered species. Our regulations at 50 CFR 424.11(e) identify three reasons why we might determine that a listed species is neither an endangered species nor a threatened species: (1) The species is extinct; (2) the species does not meet the definition of an endangered species or a threatened species; or (3) the listed entity does not meet the statutory definition of a species.

In this document to withdraw the proposal to delist *P. glabra* var. *lanaiensis*, we use the commonly understood biological definition of "extinction" as meaning that no living individuals of the species remain in existence. A determination of extinction will be informed by the best available information to indicate that no individuals of the species remain alive, either in the wild or captivity. This is in contrast to "functional extinction," where individuals of the species remain alive, but the species is no longer viable and/or no reproduction will occur (e.g., any remaining females cannot reproduce, only males remain, etc.).

In our analyses, we attempt to minimize the possibility of either (1) prematurely determining that the species is extinct where individuals exist but remain undetected, or (2) assuming the species is extant when extinction has already occurred. Our determination of whether the best available information indicates that the species is

extinct includes an analysis of the following criteria: detectability of the species, adequacy of survey efforts, and time since last detection. All three criteria take into account applicable aspects of the species' life history. Other lines of evidence may also support the determination and be included in our analysis.

In conducting our analysis of whether *P. glabra* var. *lanaiensis* is extinct, we considered and thoroughly evaluated the best scientific and commercial data available. We reviewed the information available in our files, and other available published and unpublished information, including information from recognized experts; Federal, State, and Tribal governments; academic institutions; foreign governments; private entities; and other members of the public.

The 5-year reviews of *P. glabra* var. *lanaiensis* contain more detailed biological information. This supporting information can be found on the internet at <https://www.regulations.gov> under Docket No. FWS-R1-ES-2020-0104. The following information summarizes the analysis for *P. glabra* var. *lanaiensis*.

## **Summary of Biological Status and Threats**

### *Information on Detectability, Survey Effort, and Time Since Last Detection*

#### Species Detectability

*Phyllostegia glabra* var. *lanaiensis* is a short-lived perennial herb. This taxon differs from the other variety by its longer calyces and narrowly lanceolate leaves, suggesting that flowers should be present in order to confirm identification. Most congeners (an organism belonging to the same taxonomic genus as another organism) tend to flower year-round, with peak flowering from April through June, indicating that it would be easier to detect and confirm the species during this time period.

#### Survey Effort

The PEPP surveys and monitors rare plant species on Lanai; botanical surveys are conducted on a rotational basis, based on the needs for collections and monitoring.

Opportunistic surveys are also conducted when botanists are within the known range and suitable habitat when other work brings them to that area. No observations of *P. glabra* var. *lanaiensis* have been reported since 1914. By 2012, PEPP determined that this variety was likely extirpated (PEPP 2012, p. 45), with very little chance of rediscovery due to the restricted known range, thorough search effort, and extent of habitat degradation. However, botanists were still searching for this taxon on any surveys in or near its last known location and other suitable habitat, including in January 2019 (Oppenheimer 2019, in litt.). In 2021, a new population for each of two other endangered plant taxa, *Cyanea lobata* ssp. *baldwinii* and *C. gibsonii*, were surprisingly discovered in gulches (deep ravines), where these species had not recently been known to occur, in small pockets of remnant native habitat within larger disturbed habitat. *C. gibsonii* is a known associated species of *P. glabra* var. *lanaiensis*. In January 2022, additional pockets of remnant native habitat were discovered on the slopes of Kaiholena gulch, where *P. glabra* var. *lanaiensis* had previously been known, and new locations for a third endangered plant, *Pleomele fernaldii*, were discovered. These pockets were observed from afar during survey efforts within the gulch bottom, and additional surveys are needed to identify and search these pockets within the lowland wet-mesic forest in this area, as well as in adjacent gulches.

#### Time Since Last Detection

All *P. glabra* identified since 1914 have been determined to be *P. glabra* var. *glabra*, and, therefore, *P. glabra* var. *lanaiensis* has not been detected since 1914.

#### Analysis

Threats to the species included habitat degradation and herbivory by feral ungulates such as axis deer (*Axis axis*), the establishment of ecosystem-altering invasive plant species, and the consequences of small population sizes. Historically, much of the native vegetation on Lanai was altered by early land practices with the ranching of cattle

and sheep, clearing for pineapple cultivation, and introduction of other feral animals such as goats and deer (USFWS 1990, pp. 38239–38240). While many of these foreign introduced animals have been removed from the island, habitat degradation and predation due to animals such as axis deer remain a threat.

Since the 1990s, several species of exotic plants have become common on the summit and in the gulches and valleys of Lanai. Strawberry guava (*Psidium cattleianum*) is most common on the northern end of Lanaihale (the highest point of the island of Lanai), firebush (*Myrica faya*) is most common on the south end, and manuka (*Leptospermum scoparium*) has spread throughout the island (USFWS 2020, p. 11). Kahili ginger (*Hedychium gardnerianum*) is common on some of the valley floors, as in Kaiholena Gulch, for instance, while koa haole (*Leucaena leucocephala*), lantana (*Lantana camara*), and sourbush (*Pluchea carolinensis*) also are aggressive invaders. These weedy plants are more aggressive than the native species and more successfully compete for water, minerals, space, and light. In the drier areas, broomsedge (*Andropogon virginicus*) and Guinea grass (*Megathyrsus maximus*) are the dominant exotic species (USFWS 2020, p. 11). Not only do these species replace native plants, but they are a source of fuel, increasing the potential threat of fire in the area.

Despite repeated surveys of historical and suitable habitat by botanists from 2006 through 2019, *P. glabra* var. *lanaiensis* has not been found since 1914 (PEPP 2012, p. 45; Oppenheimer 2019, in litt.). In 2012, PEPP reported that *P. glabra* var. *lanaiensis* was likely extinct. In 2019, the species was included on the list of possibly extinct Hawaiian vascular plant taxa (Wood et al. 2019, p. 11). Since 2019, however, new surveys have indicated that several endangered species have persisted in small pockets of remnant native forest within largely degraded habitat. Due to the presence and location of these pockets, as well as the associated species observed to date, we conclude that additional surveys should be conducted for this taxon.

## Summary of Analysis

At the time of its listing in 1991, *P. glabra* var. *lanaiensis* had not been detected in over 75 years. Since its last detection in 1914, botanical surveys have not detected the species. Available information indicates that, while there are currently no known individuals of the species, suitable habitat consisting of small patches of native forest on steep slopes of gulches may provide refuge for individuals of this taxon. These small remnant native forest patches, especially in steeper locations along slopes of gulches where this taxon had previously been observed, may offer some escape from direct feral ungulate damage when animals cannot traverse some small, extremely steep microsites. Additional surveys are needed for this taxon before we can conclude it is extinct. Therefore, we are withdrawing our proposed rule to remove *P. glabra* var. *lanaiensis* from the List of Endangered and Threatened Plants.

## References Cited

A complete list of references cited in this document is available on the internet at <https://www.regulations.gov> at Docket No. FWS-R1-ES-2020-0104 and upon request from the Pacific Islands Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

## Authors

The primary authors of this document are the staff members of the Branch of Delisting and Foreign Species, Ecological Services Program, and Pacific Islands Fish and Wildlife Office.

## Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

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**Martha Williams,**  
*Director,*  
*U.S. Fish and Wildlife Service.*

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